

Form PTO-1449 (modified)		Atty. Docket No. UTSH:264US	Serial No. 10/539,956
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Steven J. Norris	
		Filing Date: April 6, 2006	Group: 1645
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U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
/RS/	A1	4,554,101	11/19/85	Hopp	530	324	01/28/83
	A2	4,578,770	03/25/86	Mitani	250	559.2	06/10/83
	A3	4,596,792	06/24/86	Vyas	514	21	03/30/84
	A4	4,599,230	07/08/86	Milich, <i>et al.</i>	424	189.1	03/09/84
	A5	4,599,231	07/08/86	Milich, <i>et al.</i>	424	189.1	03/09/84
	A6	4,601,903	07/22/86	Frasch	424	250.1	05/1/85
	A7	4,608,251	08/26/86	Mia	424	185.1	11/09/84
	A8	4,801,540	01/31/89	Hiatt <i>et al.</i>	435	411	01/02/87
	A9	5,155,022	10/13/92	Naqui <i>et al.</i>	435	7.32	02/08/91
	A10	5,178,859	11/12/93	Simon <i>et al.</i>	435	139.1	09/19/90
	A11	5,187,065	02/16/93	Schutzer	435	7.32	12/22/89
	A12	5,217,872	06/08/93	Dorward <i>et al.</i>	435	7.32	02/27/90
	A13	5,217,874	06/08/93	Guadagno <i>et al.</i>	435	28	05/09/91
	A14	5,246,844	09/21/93	Norris <i>et al.</i>	435	480	10/22/91
	A15	5,279,938	01/18/94	Rosa	435	6	05/18/92
	A16	5,283,175	02/01/94	Weaver <i>et al.</i>	435	6	04/15/91
	A17	5,304,718	04/19/94	Ward <i>et al.</i>	800	266	02/03/92
	A18	5,324,630	06/28/94	LeFebvre <i>et al.</i>	435	6	06/28/91
	A19	5,385,826	01/31/95	Schell <i>et al.</i>	435	7.32	08/09/93
	A20	5,434,077	07/18/95	Simon <i>et al.</i>	435	243	05/27/93
	A21	5,436,000	07/25/95	Barbour <i>et al.</i>	424	93.2	01/11/91
	A22	5,571,718	11/05/96	Dunn <i>et al.</i>	435	252.3	09/08/92
	A23	6,437,116	08/20/02	Norris <i>et al.</i>	536	23.7	02/20/97

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/RS/	A24	6,475,492	11/05/02	Philipp <i>et al.</i>	424	234.1	04/28/99
/RS/	A25	6,610,301	08/26/03	Motz <i>et al.</i>	424	190.1	08/01/97
/RS/	A26	6,660,274	12/09/03	Philipp	424	234.1	06/29/98

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/RS/	B1	WO 00/65064	11/02/00	WIPO	English
/RS/	B2	WO 91/13630	09/19/91	WIPO	English
/RS/	B3	WO 97/31123	08/28/97	WIPO	English
/RS/	B4	WO 99/00413	01/07/99	WIPO	English

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/RS/	C1	Balmelii and Piffatetti, "Analysis of the genetic polymorphism of <i>Borrelia burgdorferi</i> sensu lato by multilocus enzyme electrophoresis," <i>Int. J. Syst. Bacteriol.</i> , 46:167-172, 1996.
/RS/	C2	Barbour and Garon, "Linear plasmids of the bacterium <i>Borrelia burgdorferi</i> have covalently closed ends," <i>Science</i> , 237:409-411, 1987.
/RS/	C3	Barbour <i>et al.</i> , "Structural analysis of the variable major proteins of <i>Borrelia hermsii</i> ," <i>J. Exp. Med.</i> , 158:2127-2140, 1983.
/RS/	C4	Barbour <i>et al.</i> , "Tandem insertion sequence-like elements define the expression site for variable antigen genes of <i>Borrelia hermsii</i> ," <i>Infect. Immun.</i> , 59:390-397, 1991.
/RS/	C5	Barbour <i>et al.</i> , "Variable antigen genes of the relapsing fever agent <i>Borrelia hermsii</i> are activated by promoter addition," <i>Mol. Microbiol.</i> , 5:489-493, 1991.
/RS/	C6	Barbour <i>et al.</i> , "Variable major proteins of <i>Borrelia hermsii</i> ," <i>J. Exp. Med.</i> , 156:1312-1324, 1982.

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/RS/	C7	Barbour, "Immunochemical analysis of Lyme disease spirochetes," <i>Yale J. Biomed.</i> , 57:581-586, 1984.
	C8	Barbour, "Plasmid analysis of <i>Borrelia burgdorferi</i> , the Lyme disease agent," <i>J. Clin. Microbiol.</i> , 26(3):475-478, 1988.
	C9	Barstad <i>et al.</i> , "Variable major proteins of <i>Borrelia hermsii</i> . Epitope mapping and partial sequence analysis of CNBr peptides," <i>J. Exp. Med.</i> , 161:1302-1314, 1985.
	C10	Barthold <i>et al.</i> , "Susceptibility of laboratory rats to isolates of <i>Borrelia burgdorferi</i> from different geographic areas," <i>Am. J. Trop. Med. Hyg.</i> , 42:596-600, 1990.
	C11	Barthold, "Antigenic stability of <i>Borrelia burgdorferi</i> during chronic infections of immunocompetent mice," <i>Infect. Immun.</i> , 61:4955-4961, 1993.
	C12	Benach <i>et al.</i> , "A murine IgM monoclonal antibody binds an antigenic determinant in outer surface protein A, an immunodominant basic protein of the lyme disease spirochete," <i>The Journal of Immunology</i> , 140:265-272, 1988.
	C13	Brandt <i>et al.</i> , "Immunogenic integral membrane proteins of <i>Borrelia burgdorferi</i> are lipoproteins," <i>Infect. Immun.</i> , 58(4):983-991, 1990.
	C14	Burgdorfer <i>et al.</i> , "Lyme disease, a tick-borne spirochetosis?," <i>Science</i> , 216:1317-1319, 1982.
	C15	Burman <i>et al.</i> , "The variable antigens Vmp7 and Vmp21 of the relapsing fever bacterium <i>Borrelia hermsii</i> are structurally analogous to the VSG proteins of the African trypanosome," <i>Molecular Microbiology</i> , 4(10):1715-1726, 1990.
	C16	Cadavid <i>et al.</i> , "Variability of a bacterial surface protein and disease expression in a possible mouse model of systemic Lyme borreliosis," <i>J Exp Med</i> , 179(2):631-42, 1994.
	C17	Carroll and Gheradini, "Membrane protein variations associated with <i>in vitro</i> passage of <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 64:392-398, 1996.
	C18	Carter <i>et al.</i> , "A family of surface-exposed proteins of 20 kilodaltons in the genus <i>Borrelia</i> ," <i>Infect. Immun.</i> , 62:2792-2799, 1994.
	C19	Casjens <i>et al.</i> , "Linear chromosomes of Lyme disease agent spirochetes: genetic diversity and conservation of gene order," <i>J. Bacteriol.</i> , 177:2769-2780, 1995.
↓	C20	Cluss and Boothby, "Thermoregulation of protein synthesis in <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 58(4):1038-1042, 1990.

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/RS/	C21	Dever <i>et al.</i> , "In vitro antimicrobial susceptibility testing of <i>Borrelia burgdorferi</i> : a microdilution MIC method and time-kill studies," <i>J. Clin. Microbiol.</i> , 30:2692-2697, 1992.
	C22	Donelson, "Mechanisms of antigenic variation in <i>Borrelia hermsii</i> and African trypanosomes," <i>J. Biol. Chem.</i> , 270:7783-7786, 1995.
	C23	Fawcett <i>et al.</i> , "Detection of antibodies to the recombinant p39 protein of <i>Borrelia burgdorferi</i> using enzyme immunoassay and immunoblotting," <i>J. Rheumatology</i> , 20(4):734-738, 1993.
	C24	Fuchs <i>et al.</i> , "Molecular analysis and expression of a <i>Borrelia burgdorferi</i> gene encoding a 22kDa protein (pC) in <i>E. coli</i> ," <i>Mol. Microbiol.</i> , 6:503-509, 1992.
	C25	GenBank Accession Number AAB09432
	C26	GenBank Accession Number AAB17737
	C27	GenBank Accession Number AAC45733
	C28	Grodzicki and Steere, "Comparison of immunoblotting and indirect enzyme-linked immunosorbent assay using different antigen preparations for diagnosing early lyme disease," <i>J. Infect. Dis.</i> , 157(4):790-797, 1988.
	C29	Hagblom <i>et al.</i> , "Intragenic recombination leads to pilus antigenic variation in <i>Neisseria gonorrhoeae</i> ," <i>Nature</i> , 315:156-158, 1985.
	C30	Howe <i>et al.</i> , "A single recombinant plasmid expressing two major outer surface proteins of the lyme disease spirochete," <i>Science</i> , 227:645-646, 1985.
	C31	Howe <i>et al.</i> , "Organization of genes encoding two outer membrane proteins of the lyme disease agent <i>Borrelia burgdorferi</i> within a single transcriptional unit," <i>Infect. Immun.</i> , 54:207-212, 1986.
	C32	Hudson <i>et al.</i> , "Increased expression of <i>Borrelia burgdorferi</i> vlsE in response to human endothelial cell membrane," <i>Mol. Microbiol.</i> , 41:229-239, 2001.
	C33	Hughes and Johnson, "Methylated DNA in <i>Borrelia</i> species," <i>J. Bacteriol.</i> , 172:6602-6604, 1990.
	C34	Hyde <i>et al.</i> , "Detection of antigens in urine of mice and humans infected with <i>Borrelia burgdorferi</i> , etiologic agent of lyme disease," <i>Journal of Clinical Microbiology</i> , 27(1):58-61, 1989.

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/RS/	C35	Indest <i>et al.</i> , "Analysis of <i>Borrelia burgdorferi</i> vlsE gene expression and recombination in the tick vector," <i>Infect. Immun.</i> , 69:7083-7090, 2001.
	C36	Jiang <i>et al.</i> , "Cross-antigenicity between the major surface proteins (ospA and ospB) and other proteins of <i>Borrelia burgdorferi</i> ," <i>J. Immun.</i> , 144(1):284-289, 1990.
	C37	Johnson <i>et al.</i> , "Infection of Syrian hamsters with lyme disease spirochetes," <i>J. Clin. Microbiol.</i> , 20:1099-1101, 1984.
	C38	Karlsson, "Western immunoblot and flagellum enzyme-linked immunosorbent assay for serodiagnosis of lyme borreliosis," <i>J. Clin. Microbiol.</i> , 28(9):2148-2150, 1990.
	C39	Kawabata <i>et al.</i> , "Genetic and immunological analyses of Vls (VMP-like sequences) of <i>Borrelia burgdorferi</i> ," <i>Microbial Pathogenesis</i> , 24:155-165, 1998.
	C40	Kitten and Barbour, "Juxtaposition of expressed variable antigen genes with a conserved telomere in the bacterium <i>Borrelia hermsii</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 87:6077-6081, 1990.
	C41	Kitten and Barbour, "The relapsing fever agent <i>Borrelia hermsii</i> has multiple copies of its chromosome and linear plasmids," <i>Genetics</i> , 132:311-324, 1992.
	C42	Kitten <i>et al.</i> , "Intragenic recombination and a chimeric outer membrane protein in the relapsing fever agent <i>Borrelia hermsii</i> ," <i>J. Bacteriol.</i> , 175(9):2516-2522, 1993.
	C43	Koomey <i>et al.</i> , "Effects of <i>recA</i> mutations on pilus antigenic variation and phase transitions in <i>Neisseria gonorrhoeae</i> ," <i>Genetics</i> , 117:391-398, 1987.
	C44	Kupsch <i>et al.</i> , "Variable opacity (Opa) outer membrane proteins account for the cell tropisms displayed by <i>Neisseria gonorrhoeae</i> for human leukocytes and epithelial cells," <i>EMBO. J.</i> , 12:641-650, 1993.
	C45	Lambden <i>et al.</i> , "Biological properties of two distinct pilus types produced by isogenic variants of <i>Neisseria gonorrhoeae</i> P9," <i>J. Bacteriol.</i> , 141:393-396, 1980.
	C46	LeFebvre <i>et al.</i> , "Characterization of <i>Borrelia burgdorferi</i> isolates by restriction endonuclease analysis and DNA hybridization," <i>Journal of Clinical Microbiology</i> , 27(4):636-639, 1989.
↓	C47	Liang and Philipp, "Analysis of antibody response to invariable regions of VlsE, the variable surface antigen of <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 67:6702-6706, 1999.

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/RS/	C48	Liang <i>et al.</i> , "Antigenic conservation of an immunodominant invariable region of the LvsE lipoprotein among European pathogenic genospecies of <i>Borrelia burgdorferi</i> SL," <i>J. Infect. Dis.</i> , 182:1455-1462, 2000.
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	C50	Liang <i>et al.</i> , "Characterization of a <i>Borrelia burgdorferi</i> VlsE invariable region useful in canine lyme disease serodiagnosis by enzyme-linked immunosorbent assay," <i>J. Clinical Microbiology</i> , 38(11):4160-4166, 2000
	C51	Liang <i>et al.</i> , "Sensitive and specific serodiagnosis of lyme disease by enzyme-linked immunosorbent assay with a peptide based on an immunodominant conserved region of <i>Borrelia burgdorferi</i> VlsE," <i>J. Clinical Microbiology</i> , 37(12):3990-3996, 1999
	C52	Livey <i>et al.</i> , "Evidence for lateral transfer and recombination in PspC variation in Lyme disease <i>Borrelia</i> ," <i>Mol Microbiol.</i> , 18:257-269, 1995.
	C53	Luft <i>et al.</i> , "Biochemical and immunological characterization of the surface proteins of <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 57(11):3637-3645, 1989.
	C54	Marconi <i>et al.</i> , "Analysis of the distribution and molecular heterogeneity of the ospD gene among the Lyme disease spirochetes: evidence for lateral gene exchange," <i>J. Bacteriol.</i> , 176:4572-4582, 1994.
	C55	Marconi, <i>et al.</i> , "Variability of osp genes and gene products among species of Lyme disease spirochetes," <i>Infect. Immun.</i> , 61:2611-2617, 1993.
	C56	Margolis <i>et al.</i> , "Homology between <i>Borrelia burgdorferi</i> OspC and members of the family of <i>Borrelia hermsii</i> variable major proteins," <i>Gene</i> , 143:105-110, 1994.
	C57	Moody <i>et al.</i> , "Lyme borreliosis in laboratory animals: effect of host species and <i>in vitro</i> passage of <i>Borrelia burgdorferi</i> ," <i>Am. J. Trop. Med. Hyg.</i> , 43(1):87-92, 1990.
	C58	Norris <i>et al.</i> , "High- and low-infectivity phenotypes of clonal populations of <i>in vitro</i> -cultured <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 63:2206-2212, 1995.
	C59	Norris <i>et al.</i> , "Low-passage-associated proteins of <i>Borrelia burgdorferi</i> B31: characterization and molecular cloning of OspD, a surface-exposed, plasmid-encoded lipoprotein," <i>Infect. Immun.</i> , 60:4662-4672, 1992.

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/RS/	C60	Pennington <i>et al.</i> , "Arthritis severity and spirochete burden are determined by serotype in the <i>Borrelia turicatae</i> -mouse model of Lyme disease," <i>Infect Immunology</i> , 65(1):285-92, 1997.
	C61	Persing <i>et al.</i> , "Genetic stability of <i>Borrelia burgdorferi</i> recovered from chronically infected immunocompetent mice," <i>Infect. Immun.</i> , 62:3521-3527, 1994.
	C62	Plasterk <i>et al.</i> , "Transposition of structural genes to an expression sequence on a linear plasmid causes antigenic variation in the bacterium <i>Borrelia hermsii</i> ," <i>Nature</i> , 318:257-263, 1985.
	C63	Purser and Norris, "Correlation between plasmid content and infectivity in <i>Borrelia burgdorferi</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 97:13865-13870, 2000.
	C64	Restrepo and Barbour, "Antigen diversity in the bacterium <i>B. hermsii</i> through 'somatic' mutations in rearranged <i>vmp</i> genes," <i>Cell</i> , 78:867-876, 1994.
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	C66	Restrepo <i>et al.</i> , "Subtelomeric expression regions of <i>Borrelia hermsii</i> linear plasmids are highly polymorphic," <i>Mol. Microbiol.</i> , 6:3299-3311, 1992.
	C67	Rosa <i>et al.</i> , "Directed insertion of a selectable marker into a circular plasmid of <i>Borrelia burgdorferi</i> ," <i>J. Bacteriol.</i> , 178:5946-5953, 1996.
	C68	Rosa <i>et al.</i> , "Recombination between genes encoding major surface proteins A and B of <i>Borrelia burgdorferi</i> ," <i>Mol. Microbiol.</i> , 6:3031-3040, 1992.
	C69	Sadziene <i>et al.</i> , "Antibody-resistant mutations of <i>Borrelia burgdorferi</i> : <i>in vitro</i> selection and characterization," <i>J. Exp. Med.</i> , 176:799-809, 1992.
	C70	Sadziene <i>et al.</i> , " <i>Borrelia burgdorferi</i> mutant lacking <i>osp</i> : biological and immunological characterization," <i>Infection and Immunity</i> , 63(4):1573-1580, 1995.
	C71	Samuels, <i>et al.</i> , "Genetic transformation of the lyme disease agent <i>Borrelia burgdorferi</i> with coumarin-resistant <i>gyrB</i> ," <i>J. Bacteriol.</i> , 176:6045-6049, 1994.
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↓	C73	Schwan <i>et al.</i> , "Changes in antigenic reactivity of <i>Borrelia burgdorferi</i> the lyme disease spirochete, during persistent infection in mice," <i>Can. J. Microbiol.</i> , 37:450-454, 1991.

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/RS/	C74	Schwan <i>et al.</i> , "Changes in infectivity and plasmid profile of the lyme disease sporochete, <i>Borrelia burgdorferi</i> , as a result of <i>in vitro</i> cultivation," <i>Infect. Immun.</i> , 56:1831-1836, 1988.
	C75	Scriba <i>et al.</i> , "The 39-kilodalton protein of <i>Borrelia burgdorferi</i> : a target for bactericidal human monoclonal antibodies," <i>Infect. Immun.</i> , 61(10):4523-4526, 1993.
	C76	Segal <i>et al.</i> , "Antigenic variation of gonococcal pilus involves assembly of separated silent gene segments," <i>Proc. Natl. Acad. Sci. USA</i> , 83:2177-2181, 1986.
	C77	Seifert and So, "Genetic mechanisms of bacterial antigenic variation," <i>Microbiol. Rev.</i> , 52:327-336, 1988.
	C78	Simpson <i>et al.</i> , "Reactivity of human lyme borreliosis sera with a 39-kilodalton antigen specific to <i>Borrelia burgdorferi</i> ," <i>J. Clin. Microbiol.</i> , 28(6):1329-1337, 1990.
	C79	Simpson <i>et al.</i> , "Antibody to a 39-kilodalton <i>Borrelia burgdorferi</i> antigen (P39) as a marker for infection in experimentally and naturally inoculated animals," <i>J. Clinical Microb.</i> , 29(2):236-243, 1991.
	C80	Stevenson <i>et al.</i> , "Expression and gene sequence of outer surface protein C of <i>Borrelia burgdorferi</i> reisolated from chronically infected mice, <i>Infect. Immun.</i> , 62:3568-3571, 1994.
	C81	Stoenner <i>et al.</i> , "Antigenic variation of <i>Borrelia hermsii</i> ," <i>J. Exp. Med.</i> , 156:1297-1311, 1982.
	C82	Szczepanski and Benach, "Lyme borreliosis: host responses to <i>Borrelia burgdorferi</i> ," <i>Microb. Rev.</i> , 55(1):21-34, 1991.
	C83	Thiessen <i>et al.</i> , "Evolution of the <i>Borrelia burgdorferi</i> outer surface protein OspC," <i>J. Bacteriol.</i> , 177:3036-3044, 1995.
	C84	Walker <i>et al.</i> , "Physical map of the genome of <i>Treponema pallidum</i> subsp. <i>pallidum</i> (Nichols)," <i>J. Bacteriol.</i> , 177:1797-1804, 1995.
	C85	Wallich <i>et al.</i> , "The <i>Borrelia burgdorferi</i> flagellum-associated 41-kilodalton antigen (flagellin): molecular cloning, expression and amplification of the gene," <i>Infect. Immun.</i> , 58(6):1711-1719, 1990.
↓	C86	Wang <i>et al.</i> , "Analysis of a VMP-like sequence (vls) locus in <i>Borrelia garinii</i> and Vls homologues among four <i>Borrelia burgdorferi</i> sensu lato species," <i>FEMS Microbiol. Lett.</i> , 199:39-45, 2001.

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DATE CONSIDERED: 04/29/2008

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Form PTO-1449 (modified)		Atty. Docket No. UTSH:264US	Serial No. 10/539,956
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Steven J. Norris	
		Filing Date: April 6, 2006	Group: 1645
U.S. Patent Documents See Page 1-2	Foreign Patent Documents See Page 2	Other Art See Page 2-9	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
/RS/	C87	Wang <i>et al.</i> , "Characterization of the vls antigenic variation loci of the Lyme disease spirochaetes <i>Borrelia garinii</i> Ip90 and <i>Borrelia afzelii</i> ACAI," <i>Molecular Microbiology</i> , 47(5):1407-17, 2003.
	C88	Wang, et al., "Characteristics of the vls Locus of <i>Borrelia garinii</i> Ip90," Abstracts of the General Meeting of the American Society for Microbiology 100 th General Meeting, 100:275, 2000.
	C89	Wilske <i>et al.</i> , "Antigenic variation and strain heterogeneity in <i>Borrelia</i> spp," <i>Res. Microbiol.</i> , 143:583-596, 1992.
	C90	Wise and Weaver, "Detection of the lyme disease bacterium, <i>Borrelia burgdorferi</i> , by using the polymerase chain reaction and a nonradioisotopic gene probe," <i>Journal of Clinical Microbiology</i> , 29(7):1523-1526, 1991.
	C91	Wu and Tokunaga, "Biogenesis of lipoproteins in bacteria," <i>Curr. Top. Microbiol. Immunol.</i> , 125:127-157, 1986.
	C92	Xu and Johnson, "Analysis and comparison of plasmid profile of <i>Borrelia burgdorferi</i> sensu lato strains," <i>J. Clin. Microbiol.</i> , 33:2679-2685, 1995.
	C93	Xu <i>et al.</i> , "Correlation of plasmids with infectivity of <i>Borrelia burgdorferi</i> sensu stricto type strain B31," <i>Infect. Immun.</i> , 64:3870-3876, 1996.
	C94	Zhang and Norris, "Genetic variation of the <i>Borrelia burgdorferi</i> gene vsIE involves cassette-specific, segmental gene conversation," <i>Infect. Immun.</i> , 66:3698-3704, 1998.
	C95	Zhang and Norris, "Kinetics and in vitro induction of genetic variation of vlsE in <i>Borrelia burgdorferi</i> ," <i>Infect. Immun.</i> , 66:3689-3697, 1998.
↓	C96	Zhang <i>et al.</i> , "Antigenic variation in lyme disease borreliae by promiscuous recombination of VMP-like sequence cassettes," <i>Cell</i> , 89:275-285, 1997.

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